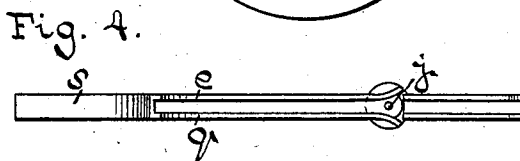
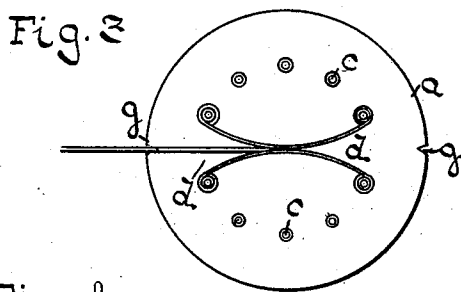
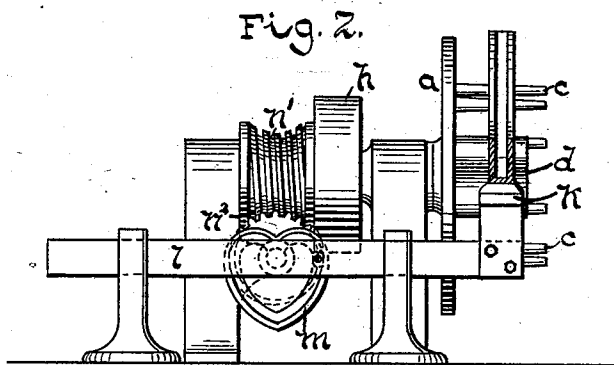
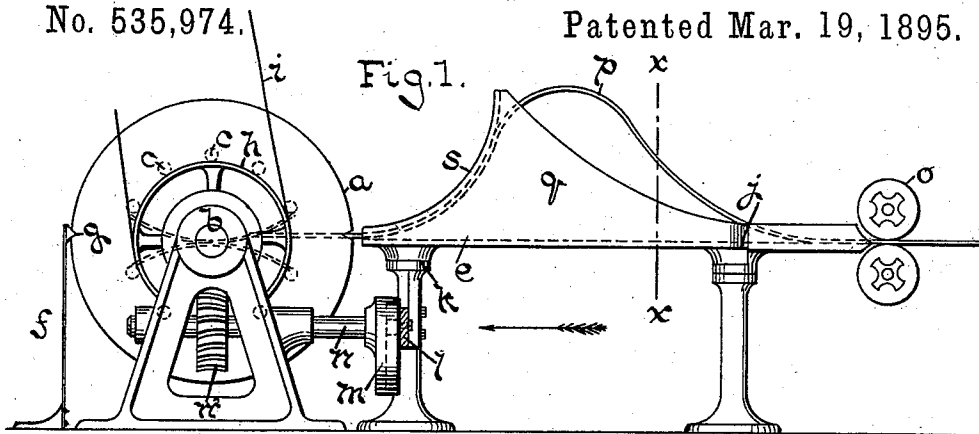


(No Model.)

T. V. ALLIS.
REEL FOR REELING METALLIC STRIPS.

No. 535,974.

Patented Mar. 19, 1895.



WITNESSES:

St. Morgan
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INVENTOR

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UNITED STATES PATENT OFFICE.

THOMAS V. ALLIS, OF NEW YORK, N. Y.

REEL FOR REELING METALLIC STRIPS.

SPECIFICATION forming part of Letters Patent No. 535,974, dated March 19, 1895.

Application filed May 9, 1894. Serial No. 510,587. (No model.)

To all whom it may concern:

Be it known that I, THOMAS V. ALLIS, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Reels for Reeling Metallic Strips, of which the following is a specification.

My invention relates to reels for reeling hot metallic strips and the like as they issue from the rolling mill in which they are produced, and it consists of improved means for automatically controlling and evenly spreading the strips on the reel, the reel being at rest to receive the ends of said strips which shoot out of the rolls rapidly, as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1, represents a side elevation of my improved reeling apparatus. Fig. 2, represents an elevation as seen looking in the direction indicated by the arrow in Fig. 1, the guide way being sectioned on line $x-x$. Fig. 3, is a face view of the reel, and Fig. 4, is a plan view of part of the guide way.

The reel is essentially of the common form consisting of the disk a , on the end of a horizontal shaft b , and having a core consisting of pins c , projecting from the face of the disk in a circle to receive the coil in such manner that it can be readily slipped off the ends of the pins for being discharged.

On the face of the reel is a radial duplex pocket d , for receiving the ends of the strips to engage the same for winding on the core properly when the reel starts, said reel being at rest with one mouth of the pocket in line with the guide e , the mouths of the pockets being about the width of the space between two pins and the depth extending from said pins to the axis of the disk or thereabout, with the bottom or inner end gradually contracted to pinch and hold the end of the strip when, at the instant said end becomes engaged, the reel is quickly started by an attendant ready at hand for shifting the clutch or belt. When the reel starts the portion of the strip entering the pocket bends and hooks in the mouth of the pocket and thus engages the core of the reel so as to be drawn and coiled thereon. A suitable spring stop f is provided in connection with the disk of the reel

having a suitable notch g , for reception of the stop to lock the reel in position for receiving the end of the strip in the pocket, the notch being adapted for the escape of the spring stop without detriment when the reel starts. A pulley h , is applied to the shaft b , for driving it by a belt i , in any approved way.

The feed way e by which the strips are conducted from the rolls o , to the reel, is employed for a traverse guide to distribute the coils laterally on the reel, said guide being jointed at j , a suitable distance back of the reel for limiting the angle of deflection of the strips so as not to bend or distort them, and near the delivery end of the guide it is supported on a seat k , carried by a sliding bar l , with which a cam m is connected to cause the bar to traverse, said cam being carried on the shaft n , which is geared with the cam by the worm n' , and worm wheel n^2 suitably for imparting the requisite slow forward and backward movement for laying the strips evenly on the reel.

Owing to the uncertainty of starting the reel by the attendant at the instant the ends of the strips strike the bottom of the pocket, I provide for allowing the strips to loop upward for relief, as indicated at p , Fig. 1, in which direction the bend of the strips will have no injurious effect, and they will return into the guide without kinks or bends as the reel takes up the slack. For this purpose the guide is made open at a suitable length back of the delivery end, and the end portion has the upwardly extended and downwardly sloping guard q , to permit the strips to loop upward for relief and being covered on the downward slope s , for a stop to prevent the loops from doubling over on to the reel, and thus I avoid all difficulties which otherwise occur in catching the strips and starting the reel.

I claim—

1. The combination in reeling apparatus for metallic strips, of a reel having means to automatically receive, and engage the ends of the strips, and a guide way that automatically receives and directs the ends of said strips from the rolls on to the reel, and is adapted to traverse laterally and provided with means for so traversing it to lay the coils on the reel substantially as described.

2. The combination in reeling apparatus for metallic strips, of a reel having means to au-

tomatically receive and engage the ends of the strips, and a traversing guide way adapted to automatically guide and direct the ends of said strips on to the reel, said guide way having the upwardly extended sides to confine the loops in a vertical plane substantially as described.

3. The combination in reeling apparatus for metallic strips, of a reel having a radial pocket closed or contracted at the bottom to automatically receive and engage the ends of the strips, and a guide way adapted to automatically guide and direct the ends of said strips delivered from the rolls into the pocket, said guide way having the upwardly extended sides to confine the loops in a vertical plane substantially as described.

4. The combination in reeling apparatus for metallic strips, of a reel having a radial pocket closed or contracted at the bottom to automatically receive and engage the ends of the strips, and a guide way adapted to automatically guide and direct the ends of said strips delivered from the rolls into the pocket, said guide way having the upwardly extended sides to confine the loops in a vertical plane, and the stop carried by said guides to prevent the loops from doubling over on the reel substantially as described.

5. The combination in reeling apparatus for metallic strips, of a reel having a radial pocket closed or contracted at the bottom to automatically receive and engage the ends of the strip, and a guide way adapted to automatically guide and direct the ends of said strips delivered from the rolls into the pocket, said guide way consisting of a fixed portion and a traversing portion jointed to the fixed portion, and means to actuate said traversing portion as a traverse guide to coil the strips

on the reel uniformly substantially as described.

6. The combination in reeling apparatus for metallic strips, of a reel having a radial pocket closed or contracted at the bottom to automatically receive and engage the ends of the strips, and a guide way adapted to automatically guide and direct the ends of said strips delivered from the rolls into the pocket, said guide way consisting of a fixed portion and a traversing portion jointed to the fixed portion, said traversing portion having the upwardly extended sides to confine the loops to a vertical plane, and said traversing portion having means to actuate it as a traverse guide substantially as described.

7. The combination in reeling apparatus for metallic strips, of a reel having a radial pocket closed or contracted at the bottom to automatically receive and engage the ends of the strips, and a guide way adapted to automatically guide and direct the ends of said strips delivered from the rolls into the pocket, said guide way consisting of a fixed portion and a traversing portion jointed to the fixed portion, said traversing portion having the upwardly extended sides to confine the loops to a vertical plane, and a stop carried by said sides to prevent the loops from doubling over on the reel, and said traversing portion having means to actuate it as a traverse guide substantially as described.

Signed at New York city, in the county and State of New York, this 18th day of April, A. D. 1894.

THOMAS V. ALLIS.

Witnesses:

W. J. MORGAN,
A. P. THAYER.